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Through the InSRA program, Dryden Many Bears found a sense of belonging as a lab member. Dryden worked on developing new molecular standards that involve the analytical ultracentrifuge (AUC) during his time in the InSRA program.

What drew you to the InSRA program?

The opportunity to participate in a strong area of interest for me, chemistry, and step a foot in the door of post-secondary engagement. I was presented an InSRA application form by a school assistant who highly recommended I considered filling it out. InSRA offered hands-on involvement with credible professors and researchers experienced in their respective fields. I was drawn to the range of departments willing to mentor us throughout the summer semester. That made choosing a specific science difficult.

What does research mean to you?

In regard to building on previous knowledge, locating areas lacking a clear indication of conciseness and need expansions. My biochemistry department, largely involving ultracentrifugation, needs tons of clarifications before results can be unanimously agreed upon. To me, research means developing up-to-date approaches in appropriate manners with respect to various practices like being cognizant of ethics.

What research have you engaged in? Tell us what you have enjoyed most about your projects, including any cool findings!

Developing new molecular standards that involve the analytical ultracentrifuge (AUC). Often, readings don't correlate strongly, and it's widely accepted the results are scattered and insufficient. My team's job has been to gather information to provide evidence that this common belief is a misconception and portrays genuine answers to be considered. I have enjoyed the process of preparing the DNA and being rewarded with the experience of preparing the analytical ultracentrifuge as our final step.

What has been your biggest takeaway from the program?

Refining my skills and strengthening my knowledge of chemistry and biology. Utilizing restriction enzymes and observing the interaction with DNA is undeniably a stronger way of learning than lectures in classrooms. This is possible through physically working with these materials and also receiving mentorship from university associates who are the most reliable sources of scientific teachings.

Did the program foster a sense of belonging? If so, how?

Absolutely. I adore how my team heavily favors teamwork and channels our various strengths towards a single objective. We all have some contrasting interests and hobbies outside of work, but we are all set on similar goals of completing post-secondary education and assist each other through our strong grasp of science. This job surrounded me with wonderful people with whom I have no problem getting along.

Has the InSRA program contributed to your future career plans?

No doubt. I was informed in the beginning to at least take my knowledge if my experience was not as exciting and pleasant as hoped, but I am happy to report that has not been the case. Specific steps in the process of purifying the plasmid DNA were appealing. Even if I don't return to working with the AUC, many processes like preparing the agarose gels and allowing the glycerol stocks to grow demonstrated the potential likelihood of returning. My path remains subject to change, but I see possibilities of returning to the biochemistry field.

What advice would you give to indigenous youth who want to peruse a career in STEM?

Be willing to step out of your comfort zone. I have felt pressured at some moments in my research, but I persisted through it and managed to impress my professor, supervisors, etc. We need more young people in the numerous fields science offers. Ensure school is a top priority and start making connections to universities or colleges prior to being enrolled. This job is a great opportunity to get a taste of what you're in for.

